Users's Guide
to NEDSS Base System
Custom Reports Created for the
Disease Surveillance Improvement Project

Ken C. Stuber

December 21, 2006

Table of Contents

Table of Figures

Revision History

Date	Author	Comment
12/20/2006	Ken C Stuber	First Draft

Introduction

As part of the Disease Surveillance Improvement Project a number of Epidemiologic and Administrative reports were specified for development. This document is a guide to their use and customization. A number of technologies were considered for the development of the reports, but for ease of use, it was decided to build the reports using SAS and then integrate the reports into the NEDSS Base System as new custom or template reports. In this way, most NEDSS reporting features will be accessible through one interface. All of these custom reports are accessed through the NEDSS Base System.

This guide is not meant to be a replacement for the NEDSS Base System (NBS) User's Guide. It is designed as a supplement to that document. This means that knowledge of the use of the NBS reports is assumed on the part of the reader of this document. If you should need further clarification on the use of a basic feature of the NBS reporting features, such as building a "where" clause using the Advanced Filters, please refer to the most current NBS User's Guide.

The reports listed and explained in this document include:

Name

1. Master Line Listing
2. Outbreak Line Listing
3. Weekly Summary Report
4. Comparison of Cases by Week over Past Years.
5. Median and Mean Case Counts by Year.
6. Enteric Serogroup Report (Campylobacteriosis, Shigellosis, Salmonella)
7. BMIRD Serogroup Report (Neisseria Meningitidis, Haemophilus Influenza)
8. Reports by Investigator: Case Counts
9. Reports by Investigator: Completeness of Variables
10. Reports by Facility (Laboratory): Case Counts
11. Reports by Facility (Laboratory): Completeness of variables

1 MASTER LINE LISTING

1.1 Description

This report is in many ways similar to the report template "Line List of Individual Cases with Program Area and Jurisdiction Security". It is a line list of cases in the system filtered using the report selection criteria. The only difference is that this report sorts the output first by Condition and then by Patient Name.

1.2 Running the Report

A pre-formatted report, based on this template and titled "*E01: Master Line List*" should exist in the 'Public Reports' Section. This report is pre-formatted to include commonly needed output columns. You may run this pre-formatted report instead of the Report Template version described below.

In the NBS, the title of this report is *"Master Line List with PA and Juris. Security. Sorted"* and it is found in the "Report Template" section. Click Run next to this report to launch it.

This report has two filters:

1. The standard condition filter, found on the 'Basic Filter' tab which is used to select the conditions that you wish to include in the report.
2. The Advanced filter, found on the 'Advanced Filter' tab which is used to create a custom 'Where' clause for the report.

You MUST include the Condition Name and Patient Name in the 'Column Selection' tab as this report is sorted by these two columns. If they are not included in the report output, the report will return an error.

1.3 Using the Report Output

The report output is a standard line list when displayed on screen as a web page. If you choose to export the report, it will export the sorted list as a Comma Separated Value (CSV) file that can then be opened easily with Excel.

2 OUTBREAK LINE LISTING

2.1 Description

This report is in many ways similar to the report template "Line List of Individual Cases with Program Area and Jurisdiction Security". It is a line list of cases in the system filtered using the report selection criteria. The only difference is that this report returns only those cases that are associated with an Outbreak and it sorts the output first by Condition, then by Outbreak Name and then by Patient Name.

In order for a case to be associated with an Outbreak, the user must have answered 'Yes' to the question 'Is this case part of an Outbreak?' in the case report form. The user must then have selected an Outbreak from the "Outbreak Name:" field that appeared after selecting 'Yes' to the first question. If an outbreak you wish to include is not on the list, contact the NBS application administrator and request that they have the outbreak added to the system.

2.2 Running the Report

A pre-formatted report, based on this template and titled "*E02: Outbreak Line List*" should exist in the 'Public Reports' Section. This report is pre-formatted to include commonly needed output columns. You may run this pre-formatted report instead of the Report Template version described below.

In the NBS, the title of this report is *"Outbreak Line List with PA and Juris. Security. Sorted"* and it is found in the "Report Template" section. Click Run next to this report to launch it.

This report has two filters:

1. The standard condition filter, found on the 'Basic Filter' tab which is used to select the conditions that you wish to include in the report.
2. The Advanced filter, found on the 'Advanced Filter' tab which is used to create a custom 'Where' clause for the report.

You MUST include the Condition Name, Outbreak Name and Patient Name in the 'Column Selection' tab as this report is sorted by these three columns. If they are not included in the report output, the report will return an error.

2.3 Using the Report Output

The report output is a standard line list when displayed on screen as a web page. If you choose to export the report, it will export the sorted list as a Comma Separated Value (CSV) file that can then be opened easily with Excel.

3 WEEKLY SUMMARY REPORT

3.1 Description

This report is a summary, tabular, report and not a line list. It lists case frequencies in a grid with Condition on the Y-Axis and MMWR Year and MMWR Week on the X-Axis. It is recommended that the Advanced Filter be used to restrict the output of the report by MMWR Year and/or MMWR Week.

3.2 Running the Report

In the NBS, the title of this report is *"Weekly Summary report"* and it is found in the "Public Reports" section. Click Run next to this report to launch it.

This report has two filters:

1. The standard condition filter, found on the 'Basic Filter' tab which is used to select the conditions that you wish to include in the report.
2. The Advanced filter, found on the 'Advanced Filter' tab which is used to create a custom 'Where' clause for the report.

To create an advanced filter on MMWR Year and/or MMWR Week, click on the 'Advanced Filter' Tab and insert each criteria using the Field, Logic and Value fields. For instance, if your objective is to return filter the report to only the MMWR Year of 2006, you would select Field = 'MMWR Year', Logic = 'Equal' and Value = '2006'. Then click the Insert button. If you wanted to further restrict the report to only MMWR Weeks 45-50 within that year, insert the AND operator and then, within parenthesis and separated by OR operators, continue to add each MMWR Week criteria. Ultimately your screen should look like the following:

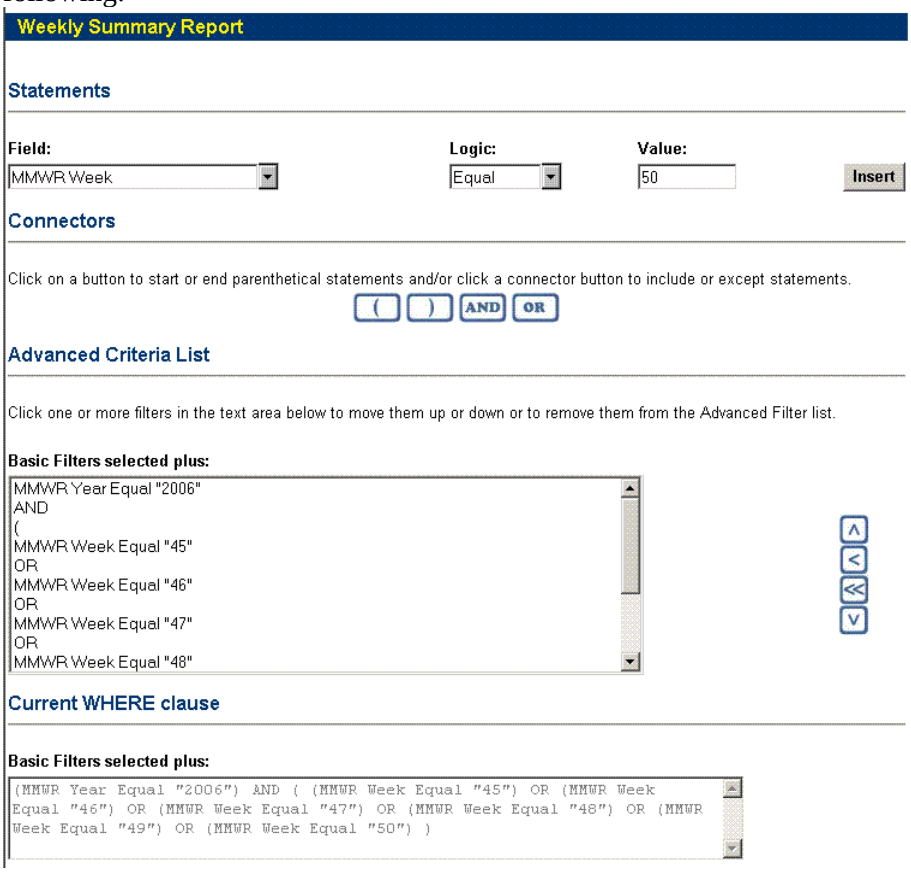

Figure 1: Advanced Filter for Weekly Summary Report

3.3 Using the Report Output

The report output is a table with Condition on the Y-axis and MMWR-Year and MMWR-Week on the X-Axis when displayed on screen as a web page. Each cell of the table represents the number of cases associated with the coordinates. For example, if you find the Intersection of MMWR Week 48 and Animal Bites, the number in that cell is the number of cases of Animal Bites reported in MMWR Week 48. If you choose to export the report, it will export the sorted list as a Comma Separated Value (CSV) file that can then be opened easily with Excel.

4 COMPARISON OF CASES BY WEEK OVER PAST YEARS

4.1 Description

This report is a summary, tabular, report. It lists case frequencies in a grid with Condition on the Y-Axis and MMWR Week and MMWR Year on the X-Axis. It is recommended that the Advanced Filter be used to restrict the output of the report to one (or very few) MMWR Weeks. Unlike the Weekly Summary Report which lists first MMWR Year and then MMWR Week on the X-axis, this report lists MMWR Week and then MMWR Year on the X-axis, facilitating cross-year analysis of the same Week.

4.2 Running the Report

In the NBS, the title of this report is *"Comparison by Week"* and it is found in the "Public Reports" section. Click Run next to this report to launch it.

This report has two filters:

1. The standard condition filter, found on the 'Basic Filter' tab which is used to select the conditions that you wish to include in the report.
2. The Advanced filter, found on the 'Advanced Filter' tab which is used to create a custom 'Where' clause for the report.

To create an advanced filter on MMWR Week, click on the 'Advanced Filter' Tab and insert each criteria using the Field, Logic and Value fields. For instance, if your objective is to filter the report to only the MMWR Week of 45, you would select Field = 'MMWR Week', Logic = 'Equal' and Value = '45'. Then click the Insert button. If you wanted to further restrict the report to only MMWR Week 45 for just MMWR Years 2005 and 2006, insert the AND operator and then, within parenthesis and separated by OR operators, continue to add each MMWR Year criteria. Ultimately your screen should look like the following:

Figure 2: Advanced Filter for Comparison By Week Report

4.3 Using the Report Output

The report output is a table with Condition on the Y-axis and MMWR-Week and MMWR-Year on the X-Axis when displayed on screen as a web page. Each cell of the table represents the number of cases associated with the coordinates. For example, if you find the Intersection of MMWR Week 48 and MMWR Year 2006 with Animal Bites, the number in that cell is the number of cases of Animal Bites reported in MMWR Week 48 and MMWR Year 2006. If you choose to export the report, it will export the sorted list as a Comma Separated Value (CSV) file that can then be opened easily with Excel.

5 Median and Mean Case Counts by Year

5.1 Description

This report is a summary, tabular, report. It lists case frequencies in a grid with Condition on the Y-Axis and MMWR Year on the X-Axis. The Advanced Filter can be used to restrict the output of the report to specific MMWR Years. Means and Medians are provided on both axes. For instance, the Mean shown in the right hand column is the Mean Case Count over the selected years for the condition shown on the Y-Axis. Similarly, the Mean shown in the bottom row is the Mean number of cases for that year for all conditions.

5.2 Running the Report

In the NBS, the title of this report is *"Median and Mean Case Counts"* and it is found in the "Public Reports" section. Click Run next to this report to launch it.

This report has two filters:
1. The standard condition filter, found on the 'Basic Filter' tab which is used to select the conditions that you wish to include in the report.
2. The Advanced filter, found on the 'Advanced Filter' tab which is used to create a custom 'Where' clause for the report.

To create an advanced filter on MMWR Year, click on the 'Advanced Filter' Tab and insert each criteria using the Field, Logic and Value fields. For instance, if your objective is to filter the report to only the MMWR Years 2005 and 2006, you would select Field = 'MMWR Year', Logic = 'Equal' and Value = '2005'. Then click the Insert button. Then insert the OR operator and another criteria for 2006. Ultimately your screen should look like the following:

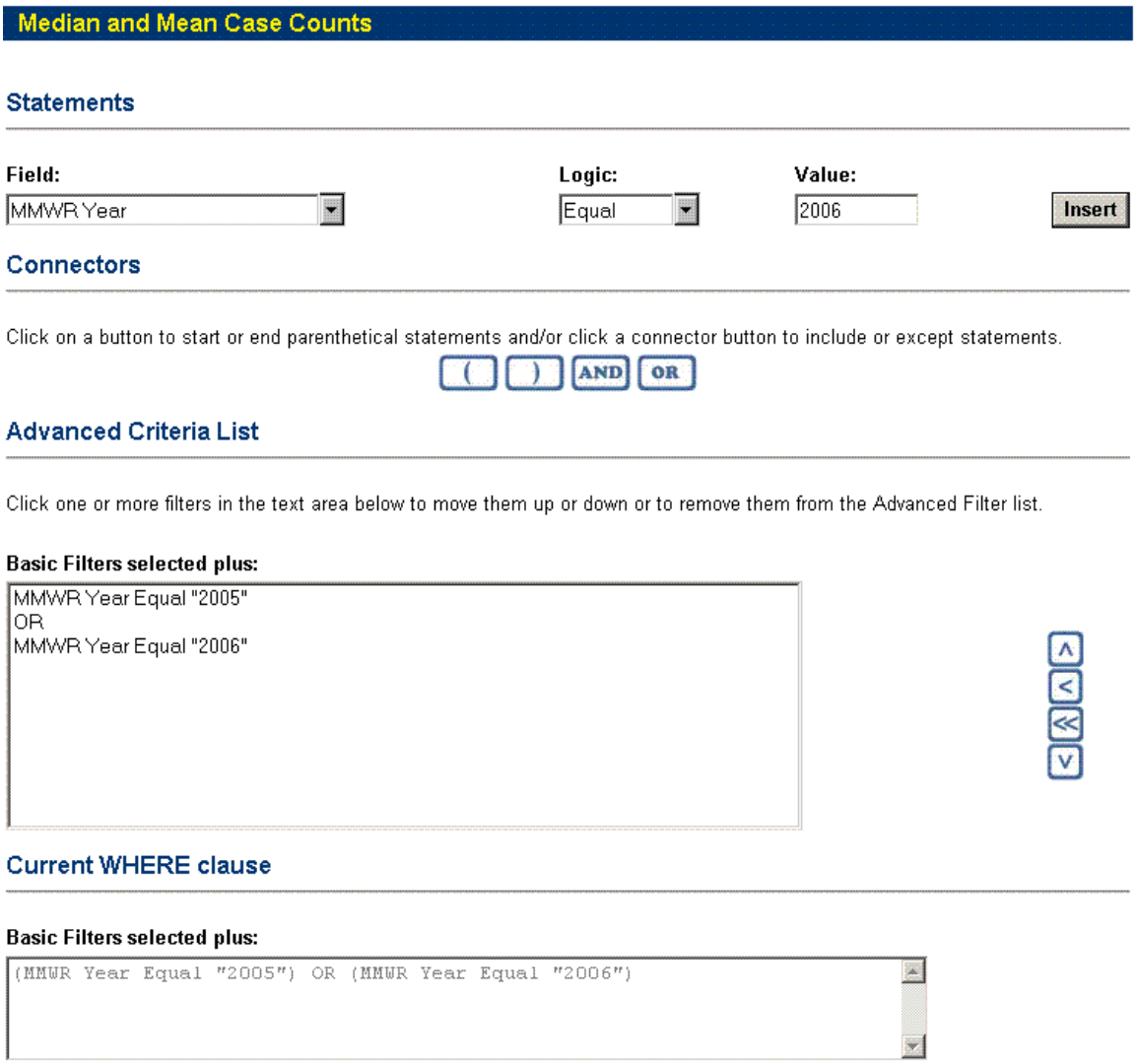

Figure 3: Advanced Filter for Median and Mean Case Count Report

5.3 Using the Report Output

The report output is a table with Condition on the Y-axis and MMWR-Year on the X-Axis when displayed on screen as a web page. Each cell of the table represents the number of cases associated with the coordinates. For example, if you find the Intersection of MMWR Year 2006 with Animal Bites, the number in that cell is the number of cases of Animal Bites reported in MMWR Year 2006. If you choose to export the report, it will export the sorted list as a Comma Separated Value (CSV) file that can then be opened easily with Excel. Mean and Median Case Counts are provided on both axes. The Vertical Means and Medians are per condition over all selected years, where the Horizontal Means and Medians are per Year over all selected conditions.

6 ENTERIC SEROGROUP REPORT

6.1 Description

This report is in many ways similar to the report template "Line List of Resulted Lab Tests". It is a line list of Lab Report Results in the system filtered using the report selection criteria. The only difference is that this report sorts the output first by Condition Name, then by Serogroup, then by Patient Last name and Patient First Name.

6.2 Running the Report

A pre-formatted report, based on this template and titled "E11a: Enteric Serogroup" should exist in the 'Public Reports' Section. This report is pre-formatted to include commonly needed output columns. Also, only the serogroups for the conditions Campylobacteriosis, Shigellosis, and Salmonella are selected. You may run this pre-formatted report instead of the Report Template version described below.

In the NBS, the title of this report is *"Line List of Enteric Serogroups (from Lab)"* and it is found in the "Report Template" section. Click Run next to this report to launch it.

This report has two filters:

1. The standard time-based filter, found on the 'Basic Filter' tab which is used to select the time period that you wish to include in the report.
2. The Advanced filter, found on the 'Advanced Filter' tab which is used to create a custom 'Where' clause for the report.

You MUST include the Condition Name, Serogroup and the Patient First and Last Names in the 'Column Selection' tab as this report is sorted by these columns. If they are not included in the report output, the report will return an error.

You can further restrict the report output by specific serogroups by adding an advanced filter. To do this, click on the 'Advanced Filter' Tab and insert each criteria using the Field, Logic and Value fields. For instance, if your objective is to return filter the report to only the Salmonella Serogroups 'enterica', 'bongori' and 'paratyphi A', you would select 'Test Result Code' for Field, 'Equal' for Logic and the SNOMED Code for 'Salmonella enterica' (L-17108) as the Value. Then click the Insert button. Then insert the OR operator and another criteria for the remaining SNOMED codes.. Ultimately your screen should look like the following.

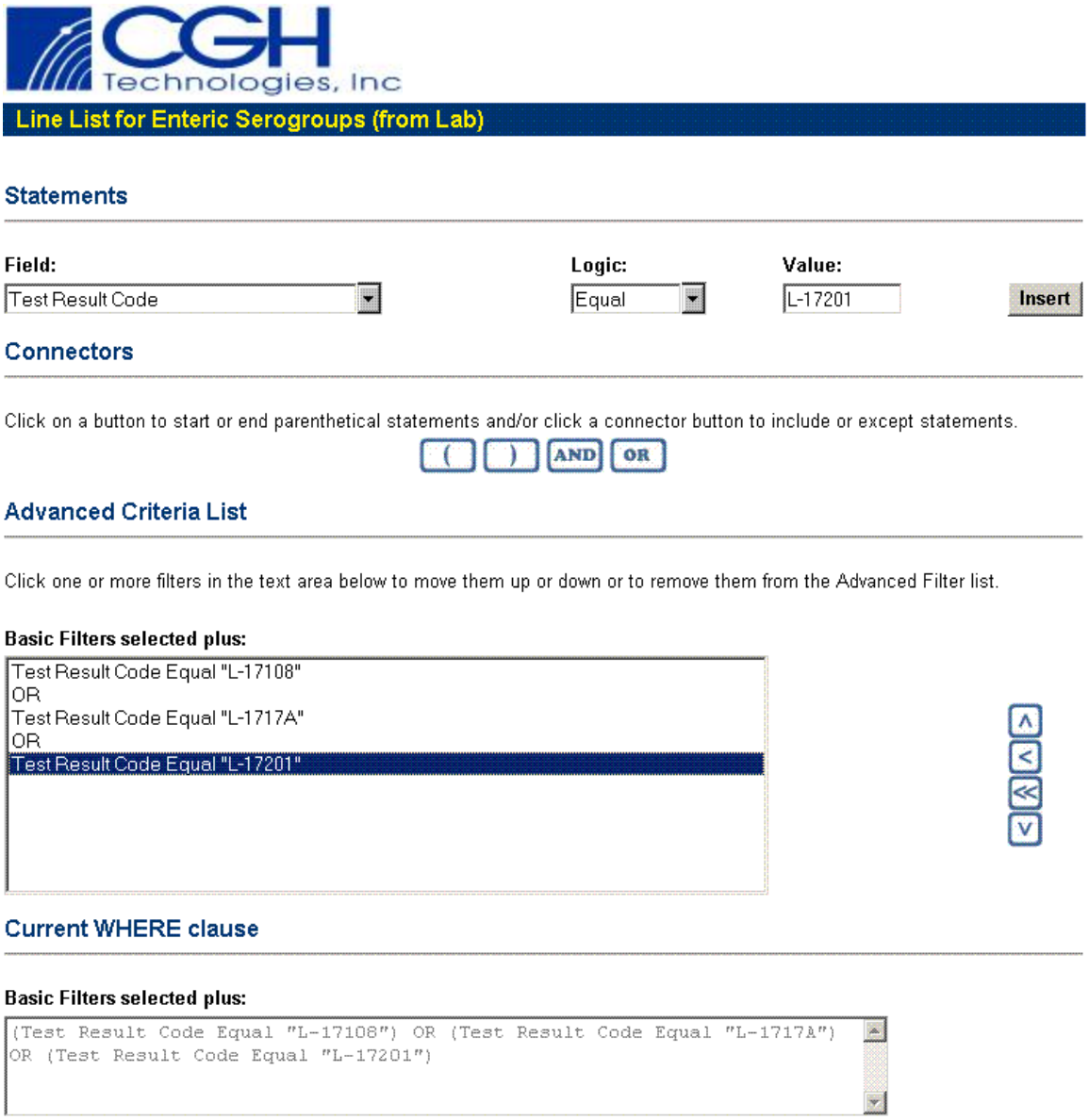

Figure 4: Advanced Filter for Enteric Serogroup Report

6.3 Using the Report Output

The report output is a standard line list when displayed on screen as a web page. If you choose to export the report, it will export the sorted list as a Comma Separated Value (CSV) file that can then be opened easily with Excel.

7 BMIRD SEROGROUP REPORT

7.1 Description of Report

This report is a standard Line Listing Report. However, the datamart being used is a custom view created especially for this report. It is a line list of BMIRD cases in the system filtered using the report selection criteria. The key fields of Serogroup and Serotype are present. Report output is sorted first by Condition Name and then by Serogroup and then by Serotype.

7.2 Running the Report

A pre-formatted report, based on this template and titled "*E11b: BMIRD Serogroup/type Line List*" should exist in the 'Public Reports' Section. This report is pre-formatted to include commonly needed output columns. You may run this pre-formatted report instead of the Report Template version described below.

In the NBS, the title of this report is *"Line List of BMIRD by Serogroup and Serotype (E11b)"* and it is found in the "Report Template" section. Click Run next to this report to launch it.

This report has two filters:

1. The standard condition filter, found on the 'Basic Filter' tab which is used to select the conditions that you wish to include in the report. Keep in mind that only the BMIRD conditions are accessible in this report.
2. The Advanced filter, found on the 'Advanced Filter' tab which is used to create a custom 'Where' clause for the report.

You MUST include the Condition Name, Serogroup and Serotype in the 'Column Selection' tab as this report is sorted by these three columns. If they are not included in the report output, the report will return an error.

7.3 Using the Report Output

The report output is a standard line list when displayed on screen as a web page. If you choose to export the report, it will export the sorted list as a Comma Separated Value (CSV) file that can then be opened easily with Excel.

8 REPORTS BY INVESTIGATOR: CASE COUNTS

8.1 Description

This report is a summary, tabular, report. It lists case frequencies in a grid with Condition on the Y-Axis and Assigned Investigator on the X-Axis. Summary counts are provided on both axes.

8.2 Running the Report

In the NBS, the title of this report is *"Reports by Investigator: Summary"* and it is found in the "Public Reports" section. Click Run next to this report to launch it.

This report has three filters:

1. The standard condition filter, found on the 'Basic Filter' tab which is used to select the conditions that you wish to include in the report.
2. The standard Time Filter, found in the 'Basic Filter' tab which is used to select the time period you wish the report to cover.
3. The Advanced filter, found on the 'Advanced Filter' tab which is used to create a custom 'Where' clause for the report.

The standard Time filter uses Event Date to find matching records. Should you wish to use MMWR Year and/or MMWR Week instead of Event Date for your time-based filter, you may add an Advanced Filter. Refer to sections 4.2 and 6.2 for examples on creating advanced filters based on MMWR Week and MMWR Year.

8.3 Using the Report Output

The report output is a table with Condition on the Y-axis and Investigator on the X-Axis when displayed on screen as a web page. Each cell of the table represents the number of cases associated with the coordinates. For example, if you find the Intersection of John Smith with Animal Bites, the number in that cell is the number of cases of Animal Bites where John Smith was the assigned Investigator. If you choose to export the report, it will export the sorted list as a Comma Separated Value (CSV) file that can then be opened easily with Excel. Summary counts are provided on both axes, giving total case counts by Condition and by Investigator.

9 REPORTS BY INVESTIGATOR: COMPLETENESS OF VARIABLES

9.1 Description

This report is in many ways similar to the report template "Line List of Individual Cases with Program Area and Jurisdiction Security". It is a line list of Investigations in the system filtered using the report selection criteria. The only difference is that this report only returns an investigation if any one of the required fields for an investigation is missing. The output is sorted first by Investigator, then by Condition, then by Patient Name.

9.2 Running the Report

A pre-formatted report, based on this template and titled "*A01b: Investigator Report Completeness*" should exist in the 'Public Reports' Section. This report is pre-formatted to include commonly needed output columns. You may run this pre-formatted report instead of the Report Template version described below.

In the NBS, the title of this report is *"Reports by Investigator - Completeness"* and it is found in the "Report Template" section. Click Run next to this report to launch it.

This report has three filters:

1. The standard condition filter, found on the 'Basic Filter' tab which is used to select the conditions that you wish to include in the report.
2. The standard time-based filter, found on the 'Basic Filter' tab which is used to select the time period that you wish to include in the report.
3. The Advanced filter, found on the 'Advanced Filter' tab which is used to create a custom 'Where' clause for the report.

You MUST include the Investigator Name, Condition Name, Patient Name, Patient DOB, Current Sex, Address, City, State, Zip, County, Ethnicity, Investigation Start Date, Investigator Assigned Date, Date of Report, Confirmation Method, Confirmation Date, Case Status, MMWR Week and MMWR Year in the 'Column Selection' tab as this report either sorts on or checks for completeness of these columns. If they are not included in the report output, the report will return an error.

9.3 Using the Report Output

The report output is a standard line list when displayed on screen as a web page. Since only those cases that are missing values are being returned, cells with no value are of particular interest. If you choose to export the report, it will export the sorted list as a Comma Separated Value (CSV) file that can then be opened easily with Excel.

10 REPORTS BY FACILITY: CASE COUNTS

10.1 Description

This report is a summary, tabular, report. It lists Lab Report frequencies in a grid with Resulted Test on the Y-Axis and Submitting Facility on the X-Axis. Summary counts are provided on both axes.

10.2 Running the Report

In the NBS, the title of this report is "*Reports by Facility - Summary*" and it is found in the "Public Reports" section. Click Run next to this report to launch it.

This report has three filters:

1. The standard Time Filter, found in the 'Basic Filter' tab which is used to select the time period you wish the report to cover.
2. The Advanced filter, found on the 'Advanced Filter' tab which is used to create a custom 'Where' clause for the report.

The standard Time filter uses Event Date to find matching records. Should you wish to use MMWR Year and/or MMWR Week instead of Event Date for your time-based filter, you may add an Advanced Filter. Refer to sections 4.2 and 6.2 for examples on creating advanced filters based on MMWR Week and MMWR Year. You may also use the advanced filter to restrict the output to specific tests performed or specific reporting facilities. For instance, if you wish only to see 'Rhode Island Hospital' on the Y-Axis, you can add an advanced filter where Field = 'Reporting Facility', Logic = 'Equals' and Value = 'RHODE ISLAND HOSPITAL' (without the quotes). When done, the advanced filter should look like the following:

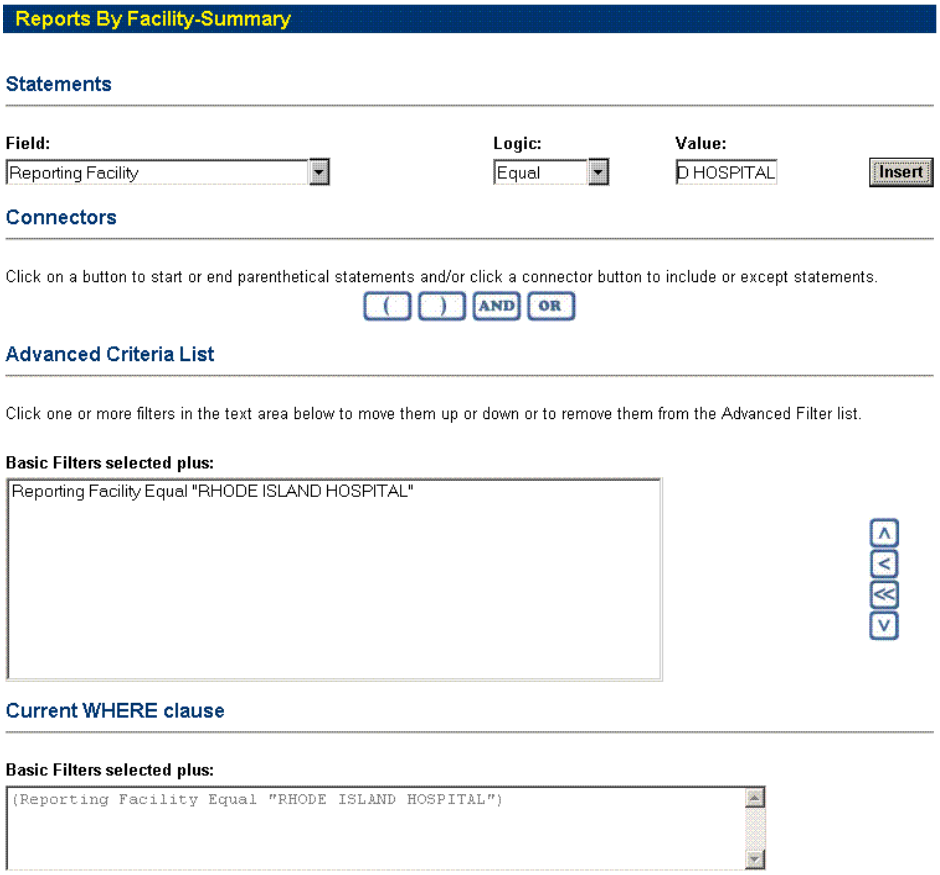

Figure 5: Advanced Filter for Reports By Facility - Summary

3 Using the Report Output

The report output is a table with Resulted Test Code on the Y-axis and Reporting Facility on the X-Axis when displayed on screen as a web page. Each cell of the table represents the number of lab reports associated with the coordinates. For example, if you find the Intersection of 'Hepatitis B Virus Surface AG' with Rhode Island Hospital, the number in that cell is the number of lab reports received for 'Hepatitis B Virus Surface AG' where 'Rhode Island Hospital was the Reporting Facility. If you choose to export the report, it will export the sorted list as a Comma Separated Value (CSV) file that can then be opened easily with Excel. Summary counts are provided on both axes, giving total case counts by Resulted Test Code and by Reporting Facility.

11 REPORTS BY FACILITY: COMPLETENESS OF VARIABLES

11.1 Description of Report

This report is in many ways similar to the report template "Line List of Resulted Lab Tests". It is a line list of Lab Report Results in the system filtered using the report selection criteria. The only difference is that this report only returns a lab report if any one of the required fields for the lab report is missing. The output is sorted first by Reporting Facility, then by Resulted Lab Test, then by Patient Last Name and Patient First Name.

11.2 Running the Report

A pre-formatted report, based on this template and titled "*A02b: Lab Facility Completeness*" should exist in the 'Public Reports' Section. This report is pre-formatted to include commonly needed output columns. You may run this pre-formatted report instead of the Report Template version described below.

In the NBS, the title of this report is *"Reports by Facility - Completeness"* and it is found in the "Report Template" section. Click Run next to this report to launch it.

This report has two filters:

4. The standard time-based filter, found on the 'Basic Filter' tab which is used to select the time period that you wish to include in the report.
5. The Advanced filter, found on the 'Advanced Filter' tab which is used to create a custom 'Where' clause for the report.

You MUST include the Reporting Facility, Resulted Test Code, the Patient First and Last Names, Patient DOB, Current Sex, Address, City, State, Zip, County, Ordering Provider, Lab Test Date, Specimen Source, and Specimen Collection Date in the 'Column Selection' tab as this report either sorts on or checks for completeness of these columns. If they are not included in the report output, the report will return an error.

11.3 Using the Report Output

The report output is a standard line list when displayed on screen as a web page. Since only those reports that are missing values are being returned, cells with no value are of particular interest. If you choose to export the report, it will export the sorted list as a Comma Separated Value (CSV) file that can then be opened easily with Excel.